Bell Atlantic-Maine/	**)**	**Departmental**
Bell Atlantic-New England	**)**	**Findings of Fact and Order**
Cumberland County	**)**	**Air Emission License**
Portland, Maine	**)**	**After-The-Fact**
A-795-71-A-N	**)**	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Bell Atlantic-Maine/Bell Atlantic-New England (BA) of Portland, Maine has applied for an Air Emission License permitting the operation of existing emission sources associated with their Home Marketing Center.

B. Emission Equipment

BA is authorized to operate the following equipment:

Fuel Burning Equipment

Equipment	**Maximum Capacity (MMBtu/hr)**	**Maximum Firing Rate (scfm)**	**Fuel Type**	**Stack #**
Boiler #1	2.07	34.5	Natural Gas	3
Boiler #2*	0.4	6.67	Natural Gas	4

*Noted for inventory purposes only (less than 1.0 MMBtu/hr).

Electrical Generation Equipment

Equipment	**Power Output (kW)**	**Firing Rate (gal/hr)**	**Maximum Capacity (MMBtu/hr)**	**Stack #**
Emergency Generator #1	435	48.2	6.75	1
Emergency Generator #2	50	3.8	0.52	2

C. Application Classification

The application for BA is treated as an existing source that is applying for its first Air Emission License.

A source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emission for the new source are determined by the maximum future license allowed emissions. This source is determined to be a minor source and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boiler #1

Boiler #1 is a Lockinvar, Model CHN 2070 boiler rated at 2.07 MMBtu/hr. The unit was manufactured in 1991, installed in 1995 and fires natural gas.

BACT for Boiler #1 is the following:

- Use of natural gas.
- PM, PM_{10}, SO_2, NO_x, CO and VOC emission limits are based on emission data taken from AP-42 dated 2/98 for natural gas fired boilers.
- Visible emissions from the stack serving Boiler #1 (Stack 3) shall not exceed 10% opacity on a six (6) minute block average basis.

C. Generator BACT discussion

Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR) and Non Selective Catalytic Reduction (NSCR) emissions control technologies were evaluated as part of the BACT analysis.

SCR

SCR utilizes ammonia or urea injected into a catalytic bed. This catalyst will require up to ten minutes to heat to the required temperature. Since the unit is operated infrequently and only operated for short periods of time, the control efficiency will be reduced by the heat up period for a SCR unit to operate. SCR units are also difficult to retrofit and have a high capital cost.

SNCR

Several types of SNCR exist on the market today: anhydrous ammonia SNCR, aqueous ammonia SNCR, urea SNCR and high energy SNCR. The temperature window required for SNCR to function properly is between 1700 ^{o}F and 1900 ^{o}F. Below the minimum 1700 ^{o}F temperature, ammonia slip occurs. Due to the intermittent use and short time the engines are run, the exhaust gas temperature is below the minimum temperature required for this type of control technology a large portion of the operating time.

NSCR

NSCR uses a three-way catalyst to reduce NO_x, CO and VOC emission. This technology is limited to rich burn-engines due to the location of the reducing agent injection. Because diesel engines are lean-burn by design, this control strategy is not technically feasible.

Natural Gas

The purpose of the generators is to provide an emergency source of electricity to power critical circuits associated with providing uninterrupted telecommunications service to residential, commercial and essential service customers (i.e., hospitals, 9-1-1, etc.). As such, the fuel used must be an uninterruptible source. The supply of natural gas can, and has in the past, be interrupted due to insufficient street pressure during high consumption periods. Due to these concerns, natural gas can not be considered as an option for these emergency generators.

D. Definition of "Emergency"

Per MEDEP Chapter 100, the definition of emergency for Chapter 115 purposes is the following:

"… any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error."

Therefore, by definition, a diesel used for load shedding purposes (also known as a "Dispachable Load Generators") is not considered an "Emergency Generator". In the case of BA, if line voltage fluctuation exceeds 10%, the generators may be operated to maintain telephone services.

E. Generator #1

Generator #1 is a Garrett Industrial Engines Model 3400130-1 turbine generator sized at 435 kW (605 HP). This unit was installed in 1991 and fires diesel fuel.

BA shall meet BACT through the firing of 0.05% sulfur diesel fuel and an operational limit of 500 hours per year. SO_2, NO_X, CO and VOC emissions from the diesel unit were obtained using AP-42 emission factors for diesel units larger than 600 horsepower dated 10/96. PM and PM_{10} emission rates are based on MEDEP Chapter 103.

Visible emissions from the diesel generator shall not exceed 30% opacity on a six (6) minute block average, except for no more than 2 six minute block averages in a 3 hour period.

F. Generator #2

Generator #2 is a John Deere, Model 361 PSL 1602 generator sized at 50 kW (70 HP). This unit was installed in 1999 and fires diesel fuel.

BA shall meet BACT through the firing of 0.05% sulfur diesel fuel and an operational limit of 500 hours per year. PM, PM_{10}, SO_2, NO_X, CO and VOC emissions from the diesel unit were obtained using AP-42 emission factors for diesel units smaller than 600 horsepower dated 10/96.

Visible emissions from the diesel generator shall not exceed 30% opacity on a six (6) minute block average, except for no more than 2 six minute block averages in a 3 hour period.

G. Annual Emission Restrictions

BA shall be restricted to the following annual emissions, based on a 12 month rolling total:

- 24,457 gallons of #2 fuel oil (0.05% sulfur) in Generator #1.
- 1,884 gallons of #2 fuel oil (0.05% sulfur) in Generator #2
- 18,000,000 cubic feet of natural gas in Boiler #1

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

Pollutant	**Tons/Year**
PM	0.3
PM_{10}	0.3
SO_2	0.1
NO_x	6.9
CO	2.3
VOC	0.3

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-795-71-A-N subject to the following conditions:

(1) Employees and authorized representatives of the Department shall be allowed escorted access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.

(6) The license does not convey any property rights of any sort, or any exclusive privilege.

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or

b. pursuant to any other requirement of this license to perform stack testing.

(ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

(iii) submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

(i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

(ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

(iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) Generator #1

A. Generator #1 shall be limited to 500 hours per year of operation, based on a 12 month rolling total. An hour meter shall be installed and operated on the unit.

B. The sulfur content of the fuel shall be less than or equal to 0.05% by weight documented by fuel receipts from the supplier.

C. A log documenting the dates, times and reason of operation for the generator shall be kept.

D. Emissions from Generator #1 shall not exceed the following:

Pollutant	lb/MMBtu	lb/hr
PM	0.12	0.81
PM_{10}	n/a	0.81
SO_2	n/a	0.34
NO_x	n/a	21.6
CO	n/a	5.74
VOC	n/a	0.68

E. Visible emissions from the Generator #1 shall not exceed 30% opacity on a six (6) minute block average, except for no more than 2 six minute block averages in a 3 hour period.

(17) Generator #2

A. Generator #2 shall be limited to 500 hours per year of operation, based on a 12 month rolling total. An hour meter shall be installed and operated on the unit.

B. A log documenting the dates, times and reason of operation for the generator shall be kept.

C. The sulfur content of the fuel shall be less than or equal to 0.05% by weight documented by fuel receipts from the supplier.

D. Emissions from Generator #2 shall not exceed the following:

Pollutant	lb/hr
PM	0.16
PM_{10}	0.16
SO_2	0.03
NO_x	2.29
CO	0.49
VOC	0.18

E. Visible emissions from the Generator #2 shall not exceed 30% opacity on a six (6) minute block average, except for no more than 2 six minute block averages in a 3 hour period.

(18) Boiler 1

A. Boiler #1 shall only fire natural gas.

B. Emissions from Boiler 1 shall not exceed the following:

Pollutant	lb/hr
PM	0.02
PM_{10}	0.02
SO_2	0.01
NO_x	0.20
CO	0.17
VOC	0.01

C. Visible Emissions

Visible emissions from Boiler #1 shall not exceed 10% on a 6 minute block average.

(19) Fuel use shall not exceed the following on a 12 month rolling total:
24,457 gallons per year of 0.05% sulfur diesel fuel in Generator #1.
1,884 gallons per year of 0.05% sulfur diesel fuel in Generator #2.
18,000,000 cubic feet of natural gas in Boiler #1.

Compliance for diesel fuel use is based on fuel delivery receipts.
Compliance for natural gas use is based on fuel meter logs.

(20) BA shall submit an application for an amendment prior to running Emergency Generators #1 and/or #2 as Dispachable Load Generators. The amendment will reflect this change and the hours of operation will be reduced from 500 to 250 hours per year (based on a 12 month rolling total).

(21) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2000.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 29, 2000
Date of application acceptance: April 20, 2000

Date filed with the Board of Environmental Protection: _____

This Order prepared by Mark Roberts, Bureau of Air Quality